

AMENDMENTS

In the Claims:

1. (Previously Presented) A method of detecting a focal length, comprising:
obtaining, while changing the focal length of an optical system, multiple image data comprising brightness data and a plurality of color data; and
calculating a focal length from the obtained multiple image data using a peak value of contrast evaluated values of said multiple image data and a peak position corresponding to a position of the peak value.
2. (Previously Presented) A method of detecting a focal length as claimed in claim 1, further comprising
weighting the evaluated values of each image data of each respective color data that has been selected is automatically performed based on conditions set for said each image data.
3. (Canceled)
4. (Previously Presented) A method of detecting a focal length as claimed in claim 1, further comprising
providing a photographing mode for calculating a focal length by using only image data that consists of color data of a specific color selected based on a subject.
5. (Previously Presented) A method of detecting a focal length as claimed in claim 1, 2 or 4, further comprising

emitting auxiliary light with given color data when the image data is obtained, and performing weighting of the evaluated values of the color image data based on the color data of the emitted auxiliary light.

6. (Previously Presented) A method of detecting a focal length as claimed in claim 1, 2 or 4, further comprising

setting a plurality of image detecting areas adjacent to one another in each one of the obtained multiple image data, calculating a partial focal length for each image detecting area based on which image data the peak value of contrast evaluated values has been recorded in, calculating the reliability of each image detecting area based on the position at which said peak value has been recorded moving across the multiple image data, and

selecting a focal length from a group consisting of said partial focal lengths and at least one given focal length, said focal length selected based on the reliability and the evaluated values of each respective image detecting area.

7. (Previously Presented) A focusing device, comprising:
an image pickup device,
an optical system for forming an image on said image pickup device,
an optical system driver for changing the focal length of said optical system, and
an image processor for processing image data output from said image pickup device and controlling said optical system driver, wherein the image processor is adapted to:

while changing the focal length of said optical system, obtain multiple image data selected from among image data of brightness data and a plurality of color data, and

calculate a focal length from the obtained multiple image data using a peak value of contrast evaluated values of said multiple image data and a peak position which corresponds to a position of the peak value.

8. (Original) A focusing device as claimed in claim 7, wherein:

the focusing device is provided with an operating means which enables the operator to perform by the operator's discretion weighting of the evaluated values of each image data of each respective color data that has been selected.

9. (Previously Presented) A focusing device as claimed in claim 7, wherein:

the image processor is adapted to automatically perform weighting of the evaluated values of each image data of each respective color data that has been selected based on conditions set for said each image data.

10. (Previously Presented) A focusing device as claimed in claim 7, 8 or 9, wherein:

the focusing device is provided with an auxiliary light device for emitting light with given color data.

11. (Previously Presented) A focusing device as claimed in claim 7, 8 or 9, wherein:

the image processor is adapted to:

set a plurality of image detecting areas adjacent to one another in each one of the obtained multiple image data, calculate a partial focal length for each image detecting area based on which image data the peak value of contrast evaluated values has been recorded in, calculate the reliability of each image detecting area based on the position at which said peak value has been recorded moving across the multiple image data, and

select a focal length from a group consisting of said partial focal lengths and at least one given focal length, said focal length selected based on the reliability and the evaluated values of each respective image detecting area.

12. (Canceled)

13. (Previously Presented) An image capturing method as claimed in claim 12, further comprising:

simultaneously selecting a plurality of photographing modes can be selected, and detecting focal lengths for each one of the selected photographing modes by using color data of a plurality of colors, and capturing images at the respected focal lengths that have been detected.

14. (Previously Presented) An image capturing method as claimed in claim 12 or 13, wherein:

the detecting of the focal length comprises:

obtaining a plurality of image data of each respective color data while changing the focal length of an optical system,

setting a plurality of image detecting areas adjacent to one another for the image data of each color data,

calculating a partial focal length for each image detecting area based on which image data the peak value of contrast evaluated values has been recorded in,

calculating the reliability of each image detecting area based on the position at which said peak value has been recorded moving across the multiple image data, and

selecting a focal length from a group consisting of said partial focal lengths and at least one given focal length, said focal length selected based on the reliability and the evaluated values of each respective image detecting area.

15. (Previously Presented) An image capturing apparatus, comprising:
an image pickup device,
an optical system for forming an image on said image pickup device,
an optical system driver for changing the focal length of said optical system, and
an image processor for processing image data output from said image pickup device and controlling said optical system driver, wherein:
the image processor is adapted to:
obtain a plurality of image data of each respective color data while changing the focal length of said optical system, and
calculate a focal length for each respective color data mentioned above by using the peak value of contrast evaluated values calculated from the obtained multiple image data, and
perform image capturing at each focal length calculated for each respective color data.

16. (Previously Presented) An image capturing apparatus as claimed in claim 15, further comprising a warning device for indicating that image capturing is underway.